

6.

Claims:

1. Device at medullary nails for fixation of bone fragments at bone fractures,

wherein a medullary nail (5) is insertable into holes (6) in medullary canals in the bone fragments (3, 4),
5 and

wherein front parts (5b) of the medullary nail (5) can be locked to one of the bone fragments (3, 4) by means of a locking means (9) which is transversely located in the bone fragment and extends through a trans-
10 verse hole (10) in said front parts (5b) of the medullary nail (5),

c h a r a c t e r i z e d i n

that the front parts (5b) of the medullary nail (5) includes a snap-in device (11) which is designed to be
15 threaded onto the locking means (9) and thereby opened by the locking means (9) and to be snapped-in again to a closed condition (figure 4) when the locking means (9) is located in the transverse hole (10) in the front parts (5b) of the medullary nail (5) such that the snap-in de-
20 vice (11) retains the medullary nail (5) at the locking means (9).

2. Device according to claim 1, c h a r a c t e -
r i z e d i n that the snap-in device (11) is designed to retain the medullary nail (5) in a firm grip at the
25 locking means (9).

3. Device according to claim 2, c h a r a c t e -
r i z e d i n that the snap-in device (11) is designed to retain the medullary nail (5) at the locking means (9) such that the medullary nail (5) can move neither sub-
30 stantially in axial direction relative to the longitudinal axis thereof nor rotate in relation thereto.

4. Device according to any preceding claim, c h a -
r a c t e r i z e d i n that the snap-in device (11) is designed such that the medullary nail (5) can not loo-
35 sen or being pulled off from the locking means (9).

7.

5. Device according to any preceding claim, c h a -
r a c t e r i z e d i n that the snap-in device (11)
has two jaws (12, 13) which are provided such that the
locking means (9), when the medullary nail (5) is moved
5 in a direction (F) in parallel with its longitudinal
axis (L) towards said locking means (9), is located
between said jaws (12, 13), eventually after rotation of
the medullary nail (5) about said longitudinal axis (L)
if necessary.

10 6. Device according to any preceding claim, c h a -
r a c t e r i z e d i n

that the snap-in device (11) has two jaws (12, 13)
defining a gap (14) of which inner parts (14a) are open
towards the transverse hole (10) in the front parts (5b)
15 of the medullary nail (5),

that the inner parts (14a) of the gap (14) have a
less width than the diameter of the transverse hole (10)
and a less width than the width or diameter of the locking
means (9),

20 that the jaws (12, 13) are elastic such that the
locking means (9) brings said jaws to spring apart when
the snap-in device (11) is threaded onto said locking
means, and

that the jaws (12, 13) due to their elasticity can
25 spring back to their original positions when the snap-in
device (11) has been threaded so far onto the locking
means (9) that said locking means (9) is situated in the
transverse hole (10), whereby the snap-in device (11)
retains the medullary nail (5) on the locking means (9).

30 7. Device according to claim 6, c h a r a c t e -
r i z e d i n that the jaws (12, 13) are provided such
that the gap (14) tapers in a direction towards its parts
(14a) and to the transverse hole (10).

8. Device according to any of claims 6 or 7,
35 c h a r a c t e r i z e d i n that the jaws (12, 13)
are provided such that outer parts (14b) of the gap (14)
are wider than the locking means (9).

8.

9. Device according to any of claims 6-8, c h a -
r a c t e r i z e d i n

that the jaws (12, 13) have a substantially greater
length (L1) than sides (10a, 10b) of the hole (10) clo-
5 sest to the gap (14) seen in the longitudinal direction
of the medullary nail (5), and/or

that inner sides of the jaws (12, 13) define or form
smaller angles with a geometric longitudinal axis (L) of
the medullary nail (5) than front portions of sides (10a,
10 10b) of the hole (10) closest to the gap (14).

10. Device according to any of claims 6-9, c h a -
r a c t e r i z e d i n that the jaws (12, 13) have
bevelled outer edge portions (12a, 13a).

11. Device according to any preceding claim, c h a -
15 r a c t e r i z e d i n that the locking means (9) is
a locking screw which is screwed into a bone fragment (4)
and which can be removed or extracted from the transverse
hole (10) in the front parts (5b) of the medullary nail
(5) by being unscrewed or backed out of the bone frag-
20 ment (4).

12. Device according to any preceding claim, c h a -
r a c t e r i z e d i n

that the front parts (5b) of the medullary nail (5)
has a second transverse hole (15) behind said first trans-
25 verse hole (10), and

that the transverse locking means (9) has a hole (16)
or another attaching member for attachment of a fixture
thereto, said fixture being adapted to guide a drill for
drilling a second hole in a lower bone fragment (4) for
30 a second transverse locking means which is adapted to
extend through the second transverse hole (15) of the
medullary nail (5).

13. Device according to any preceding claim, c h a -
r a c t e r i z e d i n that said device is adapted
35 to be used at medullary nails (5) for forearm bones, e.g.
ulna.